

Listing of Claims

The following is a listing of claims that takes the place of all prior claims.

Claim 1. (currently amended) A flow controller for releasably blocking a flow of liquid in a flow path defined by a closed perimeter, the flow controller comprising:

a rigid self-supporting panel configured to overlap the closed perimeter, the panel being provided with a first hinge member configured to mount the panel in a normal orientation overlapping the closed perimeter to substantially block the flow path, the first hinge member being further configured to allow the panel to move from the normal orientation to release the flow of the liquid, the panel being further configured with a torque member to define an amount of a normal process force of the flow of the liquid to be substantially blocked by the panel and an amount of a hydrodynamic force of the flow of the liquid to be released by the panel, the panel being further configured with a series of offsets to define channels configured to resist the amount of the normal process force of the flow of the liquid to be substantially blocked by the panel, the channels comprising a top channel section; the first hinge member being configured in the top channel section; and the torque member being configured with a weight having a selected value which when acting around the first hinge member defines the amount of the normal process force of the flow of the liquid to be substantially blocked by the panel and the amount of the hydrodynamic force of the flow of the liquid to be released by the panel .

Claims 2-46 . (canceled)

Claim 47. (original) A flow controller having a characteristic of stability in a generally horizontal flow path, flow in the flow path being characterized by normal process flow having a normal range of flow force values, the flow being further characterized by seismic-induced flow having an abnormal range of flow force values substantially exceeding the normal range of flow force values, the flow controller comprising:

a rigid self-supporting panel configured with a hinge mounting the panel in a normal vertical orientation across the flow path, the hinge being configured to allow the panel to move from the normal vertical orientation to a flow release orientation; and

a torque member mounted on the panel and configured to urge the panel to resist the normal range of flow force values of the normal process flow by the panel remaining substantially in the vertical orientation and releasably blocking the flow path, the torque member being further configured so that the urging of the panel to resist the normal range of flow force values of the normal process flow is overcome by a seismic force within the abnormal range of flow force values, the configuration of the torque member being such that in response to the seismic force the panel moves to the release orientation so that flow force in the abnormal range is released by movement of the panel to the release orientation.